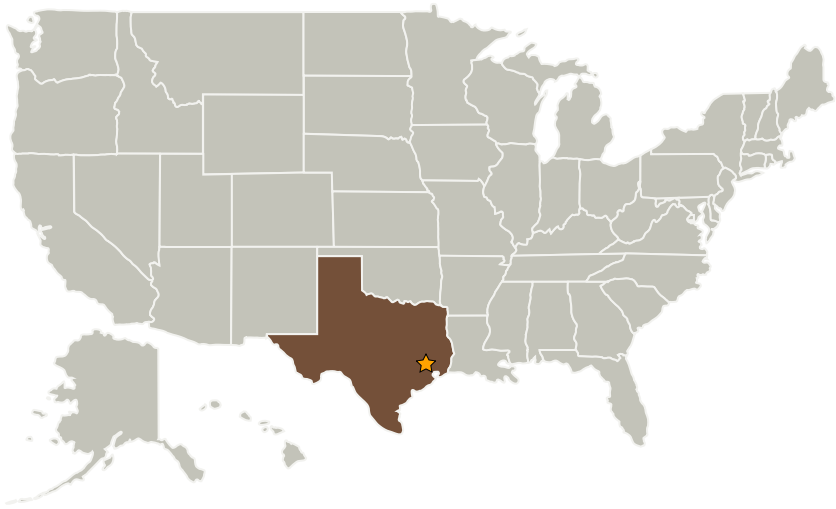
Advanced 3D Human Simulation Components with Thermal/Haptic Feedback and Tissue Deformation, Phase II

Completed Technology Project (2008 - 2010)

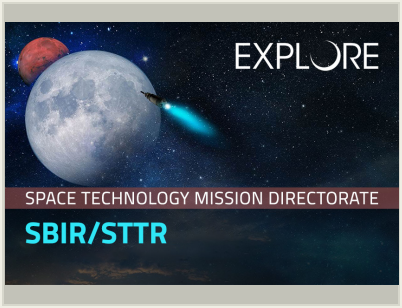
Project Introduction

In integrating the following three significant components for its research/research and development (R/R&D) effort, the power of this candidate Phase II project will be demonstrated and developed the following 1. Software Application Development Toolkit for Simulation and Training 2. Physiological Hardware/Software Interface for Dynamic Balance Trainer. 3. A Data Glove and control system captures the motion of the Robonaut hand and finger The multi-faceted CVEST development environment operates as a plug-and-play interface to various software and hardware products specializing in virtual reality-based simulation development. The final Phase II demonstration will feature to show the CVEST toolkit for the CEV Seat design concept This STTR Phase II candidate project will concentrate on some new physiological hardware/software devices to produce a Dynamic Balance Trainer System to improve Post-flight Locomotor Performance. Lastly STTR Phase II candidate project will develop and demo a prototype concept device to capture the positional and rotational of the Robonaut hand

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Johnson Space Center(JSC)	Lead Organization	NASA Center	Houston, Texas
HPN Software Consultant, Inc.	Supporting Organization	Industry	Houston, Texas



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Johnson Space Center (JSC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Primary U.S. Work Locations
Texas

Project Transitions

March 2008: Project Start

March 2010: Closed out

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX06 Human Health, Life Support, and Habitation Systems
  - TX06.2 Extravehicular Activity Systems
    - TX06.2.3 Informatics and Decision Support Systems